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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,768	08/09/2001	Kazuho Miki	HITA.0094	4344

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EXAMINER	
LEE, ANDREW CHUNG CHEUNG	
ART UNIT	**PAPER NUMBER**
2664	

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/924,768	MIKI ET AL.	
	Examiner	Art Unit	
	Andrew C. Lee	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 August 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 11, 15, 2, 7, 12, 16, 18, 3, 8, 13, 19, 5, 10, 6, are rejected under 35 U.S.C. 102(e) as being anticipated by Rao et al. (US 6850531 B1).

Regarding claims 1, 11, 15, Rao et al. disclose the limitation of a packet switching apparatus with a plurality of pairs of input/output ports (Fig. 4, column 11, lines 32 – 43; Fig. 33, Fig. 34, column 29, lines 1 – 12), the packet switching apparatus for forwarding packets it received to their destination, based on a session as point-to-point connection set up between a terminal and a destination network (column 12, lines 1 – 10;), comprising: a pathfinding table for containing entries on a plurality of entry lines, to which, route information to be known when a first packet of a session is received (column 12, lines 1 – 10; lines 17 – 22) and associated output information consisting of the identifier of an output port through which to send out the packet received (column 12, lines 23 – 28; column 12, lines 66 – 67; column 13, lines 1 – 8), the identifier of an output tunnel including one session or a bundle of a plurality of sessions through which packets are logically passed to a point in a network (column

11, lines 51 – 58; column 13, lines 9 – 23), and the identifier of an output session are defined (column 12, lines 60 – 65; column 13, lines 9 – 23); and a processing unit for packets received which searches said pathfinding table for an entry line matching with the route information included in a packet received (column 12, lines 5 – 10), performs processing for the received packet, according to packet output route information specified on the searched out entry line (column 12, lines 11 – 22; column 13, lines 9 – 23), and sends out the received packet through the output port identified by the output port identifier on said specific entry line (column 26, lines 21 – 30; column 13, lines 9 – 65).

Regarding claims 2, 7, 12, 16, 18, Rao et al. disclose the limitation of the packet switching apparatus according to claimed wherein said apparatus handles packets to be transmitted through said session or sessions based on a Point to Point Protocol (PPP) (column 24, lines 25 – 30; lines 35 – 37).

Regarding claims 3, 8, 13, 19, Rao et al. disclose the limitation of the packet switching apparatus according to claimed wherein said apparatus handles packets to be transported through output tunneling based on a Layer 2 Tunneling Protocol (L2TP) (column 24, lines 25 – 30; lines 35 – 40).

Regarding claims 5, 10, Rao et al. disclose the limitation of the packet switching apparatus according to claimed wherein said apparatus handles packets transported through input tunneling based on Generic Routing Encapsulation (GRE) (column 3, lines 23 – 26).

Regarding claim 6, Rao et al. disclose the limitation of a packet switching apparatus connected to several networks (Abstract, lines 12 – 14), each network using a specific communication protocol for transmitting packets across it (Abstract, lines 18 - 21), said packet switching apparatus for forwarding packets it received to their destination, based on a session as point-to-point connection set up between a terminal and a destination network (column 12, lines 1 – 10), comprising: a plurality of input line interface units, each connecting to at least one input line and carrying out protocol processing in compliance with the OSI Reference Model, at least Layer 1 (Fig. 27, Fig. 28 , column 24, lines 59 – 68; column 25, lines 1 – 21), for packets input through said input line; a plurality of output line interface units, each connecting to at least one output line and carrying out protocol processing in compliance with the OSI Reference Model, at least Layer 1, for packets to be output over said output line 1 (Fig. 27, Fig. 28 , column 24, lines 59 – 68; column 25, lines 1 – 21); a plurality of input session processing units, each connecting to at least a plurality of input line interface units and carrying out session or tunnel processing for packets received from the input line interface units (Fig. 28, column 25, lines 22 – 26; lines 36 – 38); a plurality of output session processing units, each connecting to at least a plurality of output line interface units and carrying out session or tunnel processing for packets to be transferred to the output line interface units (Fig. 28, column 25, lines 22 – 26; lines 38 – 42); a switch unit that carries out packet switching from the plurality of input session processing units to the plurality of output session processing units (column 26, lines 38 – 46); a control unit connecting to said plurality of input line interface units, said plurality of output line

interface units, said plurality of input session processing units, said plurality of output session processing units, and said switch unit and has control over them (column 28, lines 47 – 56). A pathfinding table for containing entries on a plurality of entry lines, to which, route information to be known when a first packet of a session is received (column 12, lines 1 – 10; lines 17 – 22) and associated output information consisting of the identifier of an output port through which to send out the packet received (column 12, lines 23 – 28; column 12, lines 66 – 67; column 13, lines 1 – 8), the identifier of an output tunnel including one session or a bundle of a plurality of sessions through which packets are logically passed to a point in a network (column 11, lines 51 – 58; column 13, lines 9 – 23), and the identifier of an output session are defined (column 12, lines 60 – 65; column 13, lines 9 – 23); and a processing unit for packets received which searches said pathfinding table for an entry line matching with the route information included in a packet received (column 12, lines 5 – 10), performs processing for the received packet, according to packet output route information specified on the searched out entry line (column 12, lines 11 – 22; column 13, lines 9 – 23), and sends out the received packet through the output port identified by the output port identifier on said specific entry line (column 26, lines 21 – 30; column 13, lines 9 – 65).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 4, 9, 14, 20, 17, are rejected under 35 U.S.C. 103(a) as being unpatentable over Rao et al. (US 6850531 B1) in view of Comstock (US 6452920 B1).

Regarding claims 4, 9, 14, 20, Rao et al. disclose the limitation of a packet switching apparatus with a plurality of pairs of input/output ports (Fig. 4, column 11, lines 32 – 43; Fig. 33, Fig. 34, column 29, lines 1 – 12), forwarding packets it received to their destination, based on a session as point-to-point connection set up between a terminal and a destination network (column 12, lines 1 – 10), Rao et al. do not disclose expressly the packet switching apparatus according to claimed wherein said apparatus handles packets to be transported through output tunneling based on a Mobile IP. Comstock discloses the limitation of the packet switching apparatus according to claimed wherein said apparatus handles packets to be transported through output tunneling based on a Mobile IP (column 4, lines 7 – 9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rao et al. to include the packet switching apparatus according to claimed wherein said apparatus handles packets to be transported through output tunneling based on a Mobile IP such as that taught by Comstock in order to provide data communications between a host and a mobile node, and in particular to data communications between the host and the mobile node that cross internetworks (as suggested by Comstock, see column 1, lines 5 – 8).

Regarding claim 17, Rao et al. disclose the limitation of a packet switching apparatus connected to several networks (Abstract, lines 12 – 14), each network using a specific communication protocol for transmitting packets across it (Abstract, lines 18 - 21), the packet switching apparatus for forwarding packets it received to their destination, based on a session as point-to-point connection set up between a terminal and a destination network, and the packet switching apparatus (column 12, lines 1 – 10) comprsing: a pathfinding table for containing entries on a plurality of entry lines, to which, route information to be known when a first packet of a session is received (column 12, lines 1 – 10; lines 17 – 22) and associated output information consisting of the identifier of an output port through which to send out the packet received (column 12, lines 23 – 28; column 12, lines 66 – 67; column 13, lines 1 – 8), the identifier of an output tunnel including one session or a bundle of a plurality of sessions through which packets are logically passed to a point in a network (column 11, lines 51 – 58; column 13, lines 9 – 23), and the identifier of an output session are defined (column 12, lines 60 – 65; column 13, lines 9 – 23); and a processing unit for packets received which searches said pathfinding table for an entry line matching with the route information included in a packet received (column 12, lines 5 – 10), performs processing for the received packet, according to packet output route information specified on the searched out entry line (column 12, lines 11 – 22; column 13, lines 9 – 23), and sends out the received packet through the output port identified by the output port identifier on said specific entry line (column 26, lines 21 – 30; column 13, lines 9 – 65).

Rao et al. does not disclose expressly arranged such that: even when the terminal

moves, leaving the area of a network and entering the area of another network among said several networks, said apparatus continues to forward packets it received through the existing point-to-point session handed over to the network where the terminal now stays only by changing the output tunnel consisting of one session or a bundle of a plurality of sessions through which packets are logically passed to a point in a network. Comstock discloses the limitation of arranged such that: even when the terminal moves, leaving the area of a network and entering the area of another network among said several networks (Fig. 2, column 2, lines 34 – 38), said apparatus continues to forward packets it received through the existing point-to-point session handed over to the network where the terminal now stays only by changing the output tunnel consisting of one session or a bundle of a plurality of sessions through which packets are logically passed to a point in a network (column 2, lines 41 – 44; lines 54 – 66; column 3, lines 1 – 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rao et al. to include an arranged such that: even when the terminal moves, leaving the area of a network and entering the area of another network among said several networks, said apparatus continues to forward packets it received through the existing point-to-point session handed over to the network where the terminal now stays only by changing the output tunnel consisting of one session or a bundle of a plurality of sessions through which packets are logically passed to a point in a network such as that taught by Comstock in order to provide data communications between a host and a mobile node, and in particular to data communications between

the host and the mobile node that cross internetworks (as suggested by Comstock, see column 1, lines 5 – 8).

Response to Arguments

5. Applicant's arguments with respect to claims 1 – 20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ajit Patel
Primary Examiner

ACL

Nov13, 2005